Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1. - 4. (canceled)

~~5.~~ 4 (currently amended) The system of claim [[4]] ~~58~~ 3 further comprising a transmission coupled between the servo-motor and feed screw for gearing the feed screw relative to the servo-motor.

~~6.~~ 5 (currently amended) The system of claim [[4]] ~~58~~ 3 wherein the motor further includes a positional encoder.

~~7.~~ 11 (currently amended) The system of claim [[1]] ~~56~~ 1 wherein the position controller controls the position of the pump relative to the substrate along three normal Cartesian coordinate axes (x, y, z).

8. - 9. (canceled)

~~10.~~ 8 (currently amended) The system of claim [[9]] ~~60~~ 7 wherein the rising edge precedes the falling edge.

~~11.~~ 9 (currently amended) The system of claim [[9]] ~~60~~ 7 wherein the falling edge precedes the rising edge.

~~12.~~ (canceled)

13. 12 (currently amended) The system of claim [[1]] 56 11 wherein the index signal comprises a count signal indicating the number of indexed rotational positions to be traversed by the motor.

14. 13 (currently amended) The system of claim [[1]] 56 11 wherein the index signal comprises a velocity signal indicating the rotational velocity of the motor.

15. 14 (currently amended) The system of claim [[1]] 56 11 wherein the index signal comprises an acceleration signal indicating the rotational acceleration of the motor.

16. 15 (currently amended) The system of claim [[1]] 56 11 wherein the position controller fixes the position of the pump during the dispensing operation.

B1 17. 16 (original) The system of claim 15 wherein the dispensing operation dispenses a dot.

18. 17 (currently amended) The system of claim [[1]] 56 11 wherein the position controller places the pump in motion during the dispensing operation.

19. 18 (original) The system of claim 17 wherein the dispensing operation dispenses a line.

20. 19 (original) The system of claim 18 wherein the index signal causes the motor to rotate at a fixed angular rate during the dispensing of a line.

21. 20 (currently amended) The system of claim [[1]] 56 11 wherein the dispensing controller comprises:

an interface unit for receiving the pump control signal and for converting the pump control signal to an intermediate signal; and

a pump motion control unit for generating the index signal in response to the intermediate signal.

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22. (currently amended) The system of claim [[1]] 56 wherein the dispensing controller further comprises:

an user interface for programming the dispensing controller with a dispensing operation program; and

a processor for processing the dispensing operation program.

23. (original) The system of claim 22 wherein the user interface comprises a touch screen interface.

24. (original) The system of claim 22 wherein the user interface comprises a computer interface.

25. - 55. (canceled)

56. (previously presented) A system comprising:

a fluid dispensing pump including a feed screw driven by a motor having indexed rotational positions, wherein the feed screw includes a helical cavity defined between a major diameter and a minor diameter of a thread of the feed screw, and wherein the fluid dispensing pump further includes a cartridge having a cavity in communication with the feed screw for introduction of dispensing fluids into the helical cavity;

a position controller for controlling the position of the pump relative to a substrate, the position controller generating a time-duration-based pump control signal; and

a dispensing controller for controlling a dispensing operation of the pump, the dispensing controller initiating the dispensing operation in response to the pump control signal by generating an index signal for the motor for initiating rotation in the motor based on the indexed rotational positions.

57. (previously presented) The system of claim 56 wherein the cartridge comprises:

a body having a bore;

a fluid inlet at a proximal end of the bore;

a fluid outlet at a distal end of the bore; and

a feed screw for delivering fluid from the fluid inlet to the fluid outlet, the feed screw having a longitudinal axis, the fluid inlet being elongated in a direction along the longitudinal axis of the feed screw.

58. (previously presented) The system of claim 56 wherein the motor comprises a closed-loop servo-motor.

59. (previously presented) The system of claim 56 wherein initiation of the time-duration-based control signal indicates that the pump is in position for a dispensing operation.

60. (previously presented) The system of claim 56 wherein the time-duration-based control signal comprises a rectangular waveform having a rising edge and a falling edge.

61. (previously presented) The system of claim 56 wherein the dispensing controller, upon completion of the dispensing operation, generates a completion signal for indicating to the position controller that the dispensing operation is completed.